In the Claims:

1. (Previously Presented) A optical communication method in which interoperable optical frequencies are defined without an absolute frequency reference, the method comprising:

distributing non-absolute references identical in frequency to nodes of a network;

providing to the nodes respective tunable multi-channel devices, the tunable multi-channel devices having channels with a center frequency and with mutually-identical frequency differences between the center frequencies of adjacent channels; and

at each of the nodes, frequency aligning one of the channels of the tunable multi-channel device thereat with the non-absolute frequency reference.

2. (Original) The method of claim 1, additionally comprising exchanging optical information signals between two or more of the nodes at a frequency aligned with another of the channels of the tunable multi-channel device.

3. (Previously Presented) The method of claim 1, in which the center frequency of at least one of the channels of the multi-channel device provided to at least some of the nodes differs from the center frequency of a corresponding channel of another multi-channel device provided to at least some other nodes prior to frequency aligning the center frequency of one of the channels of the multi-channel device with the non-absolute frequency reference.

4. (Previously Presented) The method of claim 1, additionally comprising:

at one of the nodes, frequency aligning a transmitter laser with a channel of the tunable multi-channel device thereat other than said one of the channels;

at a node other than said one of the nodes, frequency aligning a receiver laser with said channel of the tunable multi-channel device thereat other than said one of the channels; and

transmitting an optical information signal from said one of the nodes to said node other than said one of the nodes at the frequency aligned with the said channel of the tunable multi-channel device thereat other than said one of the channels.

5. (Previously Presented) The method of claim 4, in which the frequency aligning the transmitter laser comprises:

frequency aligning the transmitter laser with said one of the channels of the tunable multi-channel device; and

re-aligning the transmitter laser in frequency with said channel of the tunable multi-channel device thereat other than said one of the channels.

6. (Cancelled)

7. (Original) The method of claim 1, in which the distributing comprises providing to the nodes non-absolute frequency reference artifacts defining an identical frequency.

8. (Original) The method of claim 1, in which the distributing comprises broadcasting a non-absolute frequency reference signal to the nodes.

9. (Original) An optical communication method in which interoperable optical frequencies are defined without an absolute frequency reference, the method comprising:

providing a non-absolute frequency reference;

providing a tunable multi-channel device frequency alignable with the non-absolute frequency reference, the tunable multi-channel device having channels with stable, defined frequency differences; and

transmitting optical information signals and/or receiving optical information signals at one or more frequencies each frequency aligned with a respective one of the channels of the multi-channel device.

10. (Previously Presented) The method of claim 9, in which:

the method additionally comprises generating non-absolute frequency reference signals that are frequency aligned with respective channels of the tunable multi-channel device;

broadcasting the non-absolute frequency reference signals to the nodes; and

at each of the nodes:

receiving the non-absolute frequency reference signals, and

frequency aligning said one or more frequencies at which the optical information signals are transmitted and/or received with respective non-absolute frequency reference signals received at the node.

11. (Previously Presented) The method of claim 9, additionally comprising:

locating the tunable multi-channel device at one of the nodes;

locating additional tunable multi-channel devices at other nodes, the channels of all the tunable multi-channel devices having a center frequency and stable, mutually-identical frequency differences between the center frequencies of adjacent channels;

distributing the non-absolute frequency reference to each of the nodes; and

at each of the nodes, frequency aligning one of the channels of the multi-channel device thereat with the non-absolute frequency reference.

12. (Previously Presented) The method of claim 11, additionally comprising, at each of the nodes, frequency aligning said one or more frequencies at which the optical information signals are transmitted and/or received with respective channels of the tunable multi-channel device thereat.

13. (Previously Presented) An optical communication network in which interoperable optical frequencies are defined without an absolute frequency reference, the network comprising:

means for distributing a non-absolute frequency reference to nodes of the network; and

at each of the nodes:

a tunable multi-channel device, the tunable multi-channel devices having channels with a center frequency and with mutually-identical frequency differences between the center frequencies of adjacent channels, and

a control circuit operable to frequency align one of the channels of the multi-channel device thereat with the non-absolute frequency reference.

14. (Previously Presented) The optical communication network of claim 13, additionally comprising:

at one of the nodes, a transceiver operable to transmit an optical information signal at a frequency aligned with a channel other than said one of the channels of the multi-channel device thereat; and

at another of the nodes, a transceiver aligned in frequency with said channel other than said one of the channels of the tunable multi-channel device thereat and operable to receive the optical information signal.

15. (Original) The optical communication network of claim 14, in which the transceiver operable to transmit comprises:

a light source; and

a channel selector operable to align the light source in frequency with the other of the channels of the multi-channel device.

16. (Original) The optical communication network of claim 14, in which the transceiver operable to receive comprises:

a light source;

a channel selector operable to frequency align the light source with the other of the channels of the multi-channel device; and

means, operating in response to light generated by the light source, for selecting an optical information signal for receiving.

17. (Original) The optical communication network of claim 13, in which:

the multi-channel device comprises a Fabry-Perot etalon comprising a cavity, the cavity having a length; and

each of the nodes comprises a control circuit operable to tune the etalon by adjusting length of the cavity of the etalon in response to a feedback signal indicative of a frequency difference between a resonance node of the etalon and the non-absolute frequency reference.

18. (Original) An optical communication network in which interoperable optical frequencies are defined without an absolute frequency reference, the network comprising:

a non-absolute frequency reference;

a tunable multi-channel device frequency alignable with the non-absolute frequency reference, the tunable multi-channel device comprising channels having stable, defined frequency differences; and

nodes each comprising a transceiver operable to transmit optical information signals and/or to receive optical information signals at one or more frequencies each frequency aligned with a respective one of the channels of the multi-channel device.

19. (Previously Presented) The optical communication network of claim 18, in which:

the network additionally comprises light sources frequency aligned with the channels of the tunable multi-channel device and operable to generate respective non-absolute frequency reference signals for broadcast to the nodes; and

each of the nodes comprises a channel selector operable to frequency align said one or more frequencies at which the transceiver is operable to transmit and/or receive the optical information signals with respective non-absolute frequency reference signals received thereat.

20. (Previously Presented) The optical communication network of claim 18, in which:

the non-absolute frequency reference is distributed to each of the nodes;

the tunable multi-channel device is located at one of the nodes;

nodes other than said one of the nodes each comprise a tunable multi-channel device, all the tunable multi-channel devices having mutually-identical channel spacings; and

each of the nodes comprises a control circuit operable to frequency align one of the channels of the multi-channel device thereat with the non-absolute frequency reference.

21. (Original) The optical communication network of claim 20, in which each of the nodes additionally comprises a channel selector operable to frequency align the one or more frequencies at which the transceiver is operable to transmit and/or receive the optical information signals with respective ones of the channels of the tunable multi-channel device thereat.